Chevron Richmond Refinery Power Plant Replacement Project

California Energy Commission
August 30, 2007

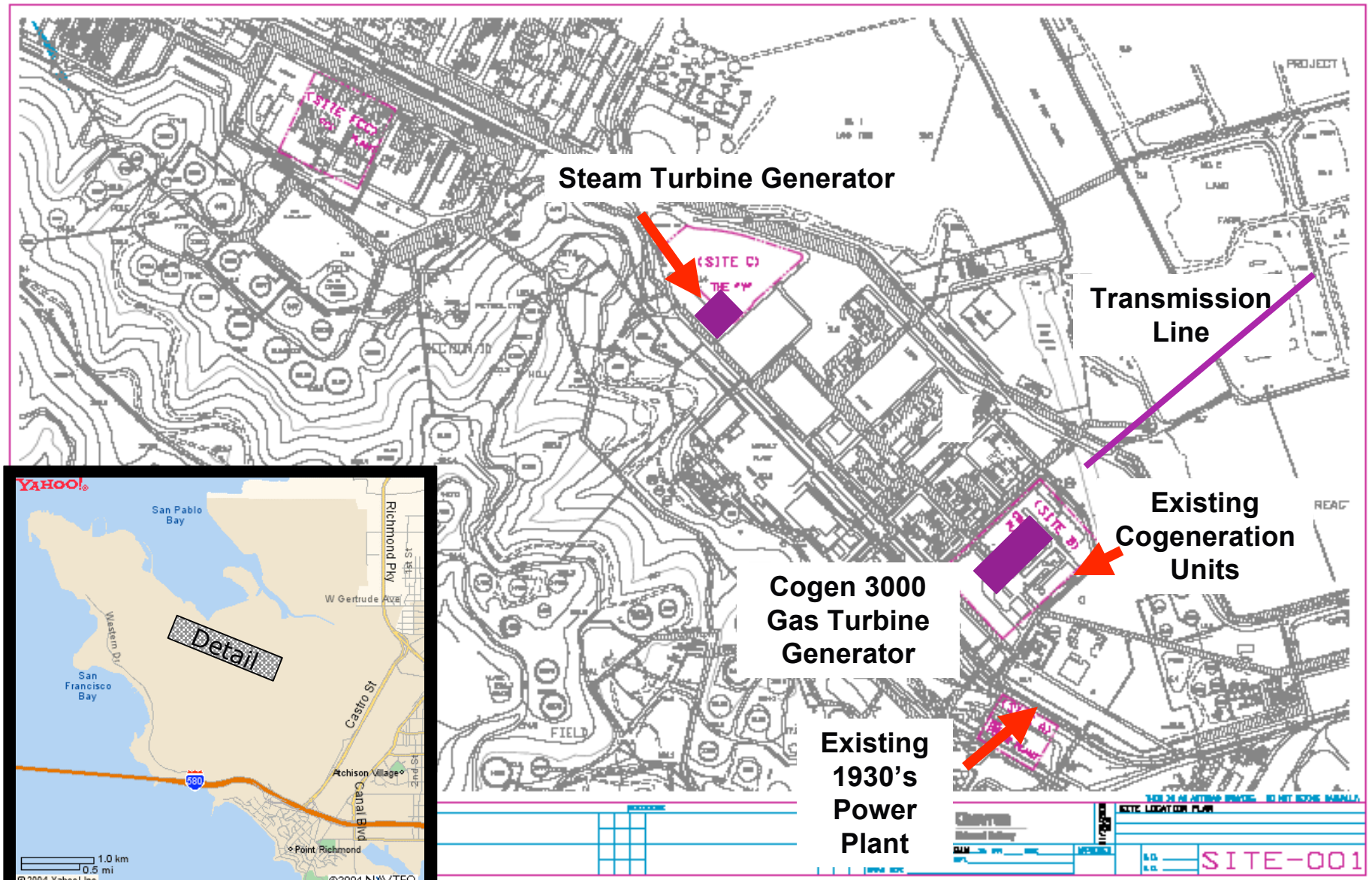
Richmond Refinery
Power Plant Replacement Project

- The power plant replacement project is a subset of the Refinery's Renewal Project.
- The power plant replacement project includes:
  - Replace 1930's power plant with Cogen 3000 gas turbine generator.
  - Enhance new hydrogen plant efficiency with steam turbine generator.
- The power plant project will:
  - Improve reliability with new equipment and technology.
  - Generate enough electricity for self-sufficiency, reducing our demand on the PG&E grid.
  - Use less energy per unit of electricity and hydrogen produced.
  - Improve efficiency of process steam production.

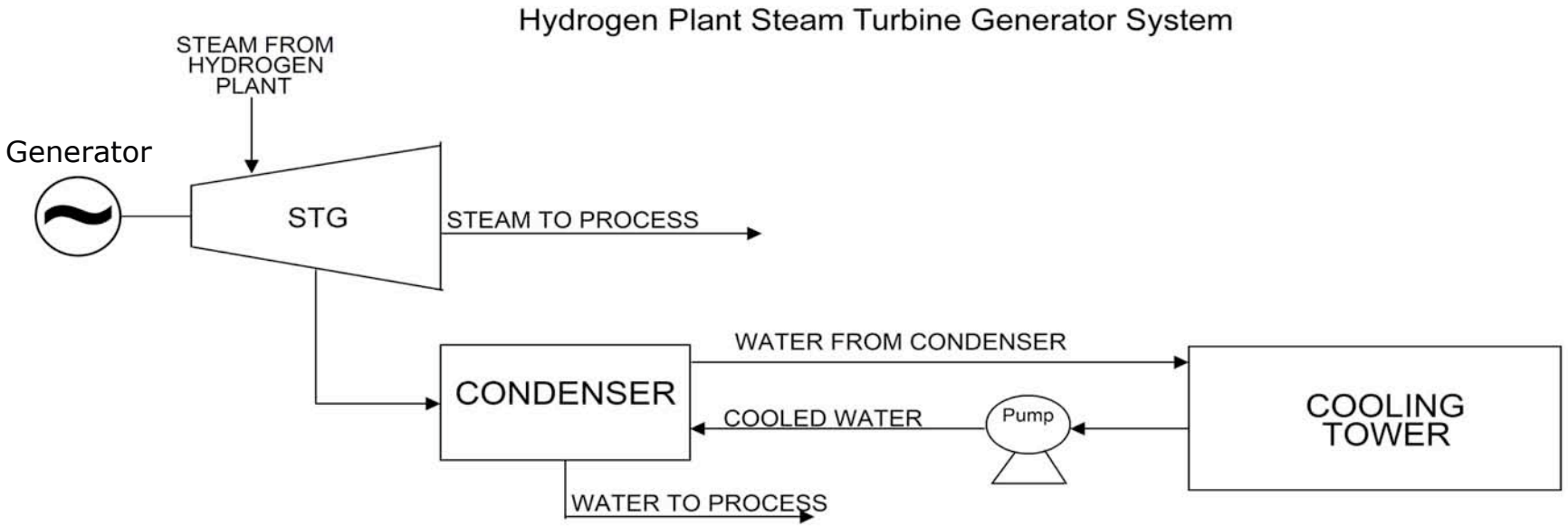
Power Plant Project Overview

- 60 Megawatt (MW) net electricity generation increase
  - 43 MW net Cogeneration System (Cogen 3000)
  - 17 MW net Steam Turbine System in New Hydrogen Plant
- Shut down existing steam boilers in Refinery's No. 1 Power Plant
- Upgrade about 4000 feet of wire on five existing onsite transmission towers

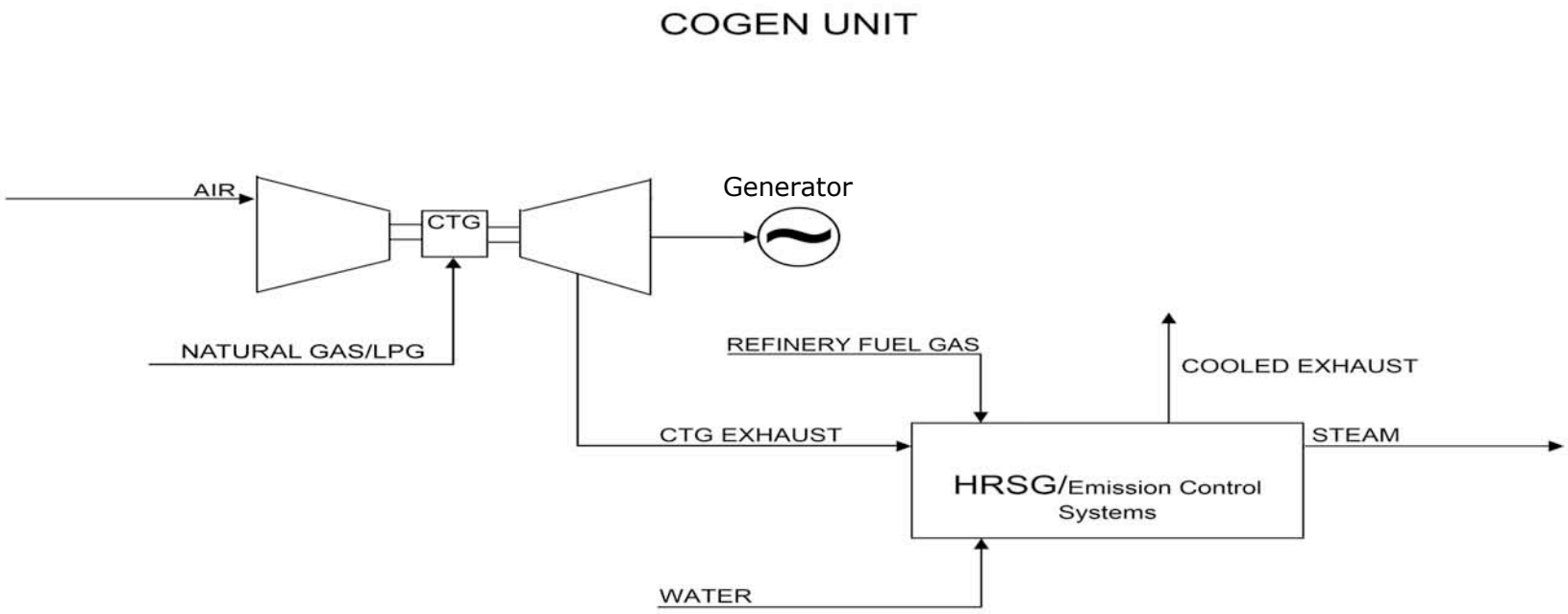
Refinery Site Plan



Hydrogen Plant
Steam Turbine Generator



Cogeneration Unit



1930's Power Plant to be replaced

Two Existing Cogeneration Units

Environmental Benefits

- Renewal Project delivers overall criteria pollutant reduction.
- Emissions from Renewal Project remain below CEQA levels of significance.
- Cogeneration produces less greenhouse gas and other criteria pollutant emissions compared with separate production of steam and electricity.
- Hydrogen plant steam turbine system will use recycled water.
- Cogen 3000 plant is designed to use recycled water.
- All water discharge in compliance with NPDES permit.

Additional Benefits

- Generates millions in tax revenue
  - Funds could be used for public safety programs, street and road repairs and other essential services.
- Creates hundreds of jobs
  - Construction and engineering jobs during project build-out.
- Increases supply of gasoline to California market.

Project Timeline

- SPPE application filed June 22, 2007
- Anticipate SPPE decision 1Q 2008
- Construction begins upon receipt of permits
- Commercial operation planned for 2009

Summary

- Improves Refinery reliability, energy efficiency and provides environmental benefits.
- Provides benefits to City and Community including job opportunities and revenue.
- Chevron looks forward to continuing our work with the California Energy Commission.